

Work Order ID 156491

Friday, January 27, 2017 1:24:35 PM

156491

U/R

OK 9/17/16

Page 1

Item ID: D4095-047 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Wearpad Aft
 Start Date: 1/19/2017 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 1/27/2017 Req'd Qty: 4.00 *4* Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: FEB 02 2017 Tooling: Date: Run Start *NR1*
 QC: 9-89 Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	C								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.05							
FLOW CNC Waterjet	1-Cut as per Dwg (D4095-7) Dwg Rev: <u>C</u> Prog Rev: <u>C</u> 2-Debur if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.01							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.01							
Quality Control									

(4) ac 17/02/07

(4) ac 17/02/07

4
 DAS 38 9-89
 FEB 08 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

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Page 2

Item ID: D4095-047 Accept ***N900040100*** Setup Start ***NS1***
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Start Date: 1/19/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 1/27/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC Brake NC	Form as per dwg NC BRAKE Memo	0.00 0.01			DAS 30 9-89	(4)			FEB 09 2017
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.01				4			DAS 38 9-89 FEB 10 2017
150 *150* autoweld 1 Automated Welding 1	Weld per dwg & QSI004 4.5 Large Fab Memo ***SEE NOTE 10 FOR SURFACE BUILDUP*** 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: <u>M136551</u>	0.00 0.27				4	QL/2	17-02-13	

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 1/19/2017 **Start Qty:** 4.00 ***4***

Required Date: 1/27/2017 **Req'd Qty:** 4.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Insp. Stamp

0.00

160

QC

Memo

0.01

Quality Control

FEB 14 2011

0.00

170

QC

Memo

0.01

Quality Control

FEB 14 2017

0.00

180

HandFinish

Memo

0.03

Hand Finishing

COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER
DWG
A/R ROCKGUARD BATCH: 136470

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Page 4

Item ID: D4095-047 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearpad Aft
Start Date: 1/19/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 1/27/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC3- Inspect Part Finish	0.00							
190						4			DAS 38 9-89
QC	Memo	0.01							FEB 15 2017
Quality Control									
200	Identify as per dwg & Stock Location: _____	0.00							
200									DAS 38 9-89
Packaging	Memo	0.01							FEB 16 2017
Packaging	LOCATION : FP001								
210	QC21- Final Inspection - Work Order Release	0.00							
210									DAS 21 9-89
QC	Memo	0.07							FEB 16 2017
Quality Control									DAS 21 9-89 FEB 15 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

Picklist Print

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Page 1

Work Order ID: 156491

156491

Parent Item: D4095-047

D4095-047

Parent Item Name: Wearpad Aft

Start Date: 1/19/2017

Required Date: 1/27/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP rev.A 11.11.07 new issue EC verified by:JLM
15.10.29 AUTOMATE WELDING DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S16GA

Purchased

No

sf

95.5900

0.588

M304S16GA

2/17/2018

304/316 Sheet .063

Location

Loc Qty

Loc Code

MAT010

95.59

m134604

5

m136036

10.49

m136327

16.1

m136687

64

✓

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

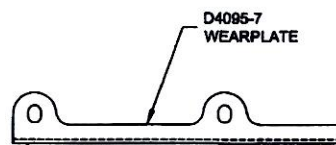
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

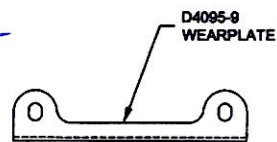
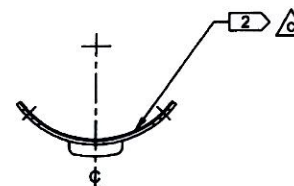
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ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

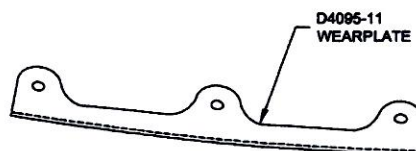
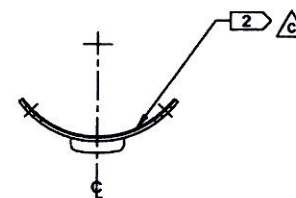
NO. 156491 *MLJ*
1702-02



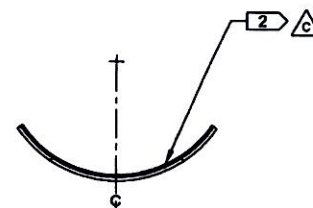
D4095-047 WEAR PAD ASSEMBLY



D4095-049 WEAR PAD ASSEMBLY



D4095-051 WEARPAD ASSEMBLY



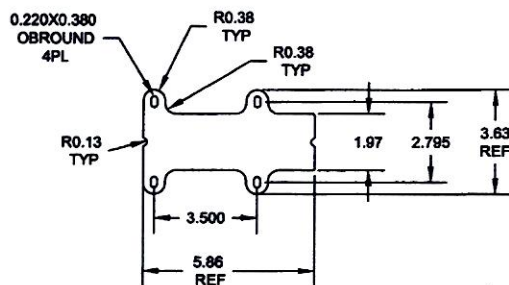
UNDER REVIEW

URF 16-572 ML

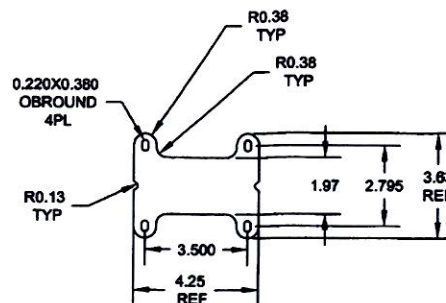
16.05.03

RELEASED
2016-01-11

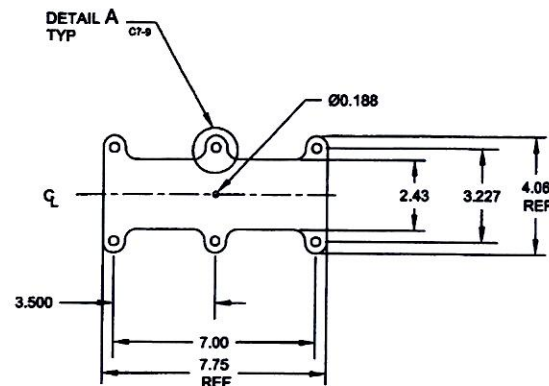
DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 3 OF 9
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	16.01.06	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE SUPPLIER'S CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



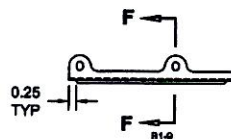
D4095-7F FLAT PATTERN 1



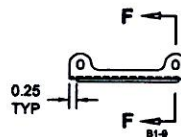
D4095-9F FLAT PATTERN 1



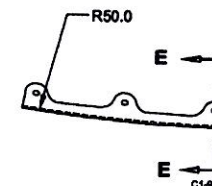
D4095-11F FLAT PATTERN 1



D4095-7 LONGITUDINAL BEND
(MADE FROM D4095-7F)



D4095-9 LONGITUDINAL BEND
(MADE FROM D4095-9F)



D4095-11 BENDING DETAIL
(MAKE FROM D4095-11F)

D4095-7-9-11 NOTES:

1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX

6) IDENTIFICATION: N/A

7) WEIGHT: N/A

8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5

9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

UNDER REVIEW

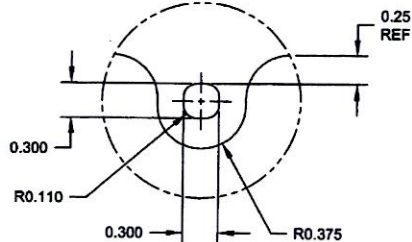
URF 16-572 ML

16.05.03

RELEASED
2016-01-11

DESIGN		DART AEROSPACE USA, INC
DRAWN		EUGENE, OR
CHECKED		DRAWING NO. REV. C
MFG. APPR.		D4095 SHEET 8 OF 9
APPROVED		TITLE SCALE
DE APPR.		WEARPLATE NTS
DATE	16.01.06	

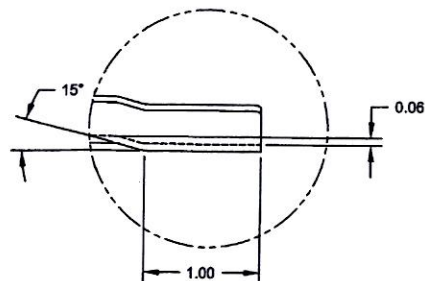
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DETAIL A: TAB DETAIL

SCALE 4X

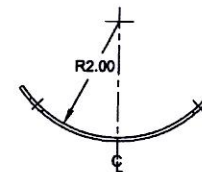
C3-3
C6-5
D3-7
D2-8



DETAIL B: JOGGLE DETAIL

SCALE 4X

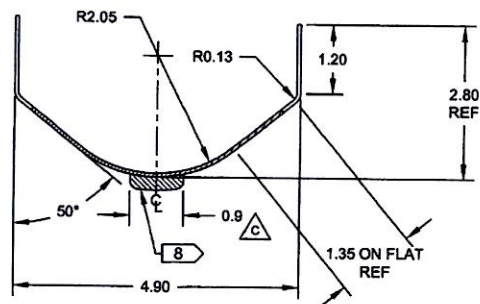
B2-4
B6-4
B3-5
B2-7



SECTION E-E

SCALE 2X

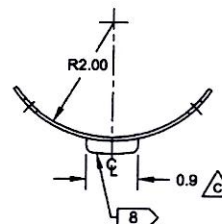
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B2-8



SECTION C-C

SCALE 2X

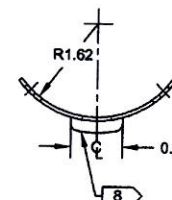
B5-4
B4-5



SECTION D-D

SCALE 2X

B4-4
B5-5



SECTION F-F

SCALE 2X

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